What is claimed:

1. A fail-safe control method for an internal combustion engine, comprising:

determining when a throttle valve in an intake system of the internal combustion engine is stuck in a fixed position;

controlling a throttle aperture to maintain the aperture in the fixed position; and

operating a fail-safe control to ensure a predescribed torque in the engine.

2. The fail-safe control method for an internal combustion engine described in Claim 1, and further comprising:

performing recovery diagnostics while control is being performed, to determine whether or not the fixed state of the throttle valve was released.

3. The fail-safe control method for an internal combustion engine described in Claim 2, and further comprising:

increasing the aperture of the throttle valve when the amount of fuel injection is less than the prescribed amount (including zero); and

determining whether the fixed state of the throttle valve has been released on increasing the throttle aperture.

4. The fail-safe control method for an internal combustion engine described in Claim 1, wherein the fail-safe control controls the amount of fuel injection by increasing it to become more than the amount of fuel injection set when normal control of air intake volume is performed when maintaining the throttle valve aperture in the fixed state.

5. The fail-safe control method for an internal combustion engine described in Claim 4, wherein the fail-safe control performs control by suppressing the occurrence of smoke when the air-fuel ratio is less than the prescribed mixture, or is a rich mixture, when said amount of fuel injection has been increased.

6. The fail-safe control method for an internal combustion engine described in Claim 5, wherein the control for suppressing the occurrence of smoke includes a control to delay the fuel injection timing more than when normal control is performed.

7. The fail-safe control method for an internal combustion engine described in Claim 5, wherein the control for suppressing the occurrence of smoke includes a fuel injection control that divides the injection into reserve fuel injection and main fuel injection so that the reserve fuel injection timing is on the advance side and the main fuel injection is on the delay side as compared to when normal control is performed.

8. The fail-safe control method for an internal combustion engine described in Claim 5, wherein the control for suppressing the occurrence of smoke includes a fuel injection control that divides the injection into reserve fuel injection and main fuel injection so that the proportion of reserve fuel injection is reduced or eliminated as compared to normal control.

9. The fail-safe control device for an internal combustion engine described in Claim 5, wherein the control for suppressing the occurrence of smoke includes a control that reduces or stops the EGR rate.

10. The fail-safe control device for an internal combustion engine described in Claims 1, wherein the internal combustion engine is provided with an exhaust micron particle collecting device in the exhaust system that performs regeneration control while closing the throttle aperture and raising the exhaust temperature to eliminate the exhaust micron particles collected in said exhaust micron particle collecting device and when said throttle valve is diagnosed as being stuck, stops said regeneration control and switches to said fail-safe control.

11. A fail-safe control device for an internal combustion engine, comprising:
a throttle valve;
a diagnostic for determining a position of the throttle valve; and
a control to control the throttle aperture when the throttle valve is stuck in a fixed position.

12. The fail-safe control device described in Claim 11, wherein the control for suppressing the occurrence of smoke further comprises a control to delay the fuel injection timing more than when normal control is performed.

13. The fail-safe control device described in Claim 11, wherein the control for suppressing the occurrence of smoke further comprises a fuel injection control that divides the injection into reserve fuel injection and main fuel injection so that the reserve fuel injection timing is on the advance side and the main fuel injection is on the delay side as compared to when normal control is performed.

14. The fail-safe control device described in Claim 11, wherein the control for suppressing the occurrence of smoke further comprises a fuel injection control that divides the injection into reserve fuel injection and main fuel injection so that the proportion of reserve fuel injection is reduced or eliminated as compared to normal control.

15. The fail-safe control device described in Claim 11, wherein the control for suppressing the occurrence of smoke further comprises a control that reduces or stops the EGR rate.

16. The fail-safe control device described in Claim 11, wherein the engine further comprises:

an exhaust micron particle collecting device in the exhaust system that performs regeneration control while closing the throttle aperture and raising the exhaust temperature to eliminate the exhaust micron particles collected in the exhaust micron particle collecting device and when the throttle valve is diagnosed as being stuck, stops said regeneration control and switches to the fail-safe control.